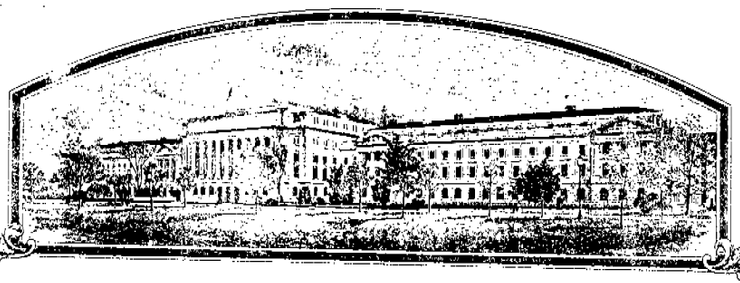

No. 7700062

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Land O'Lakes, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'MAX'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 11th day of May in the year of our Lord one thousand nine hundred and seventy-eight

Attest:

Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(1-76)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
LL 4102	MAX	PV NUMBER 7700062
2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE 4-15-77 / TIME 4:00 A.M. (P.M.)
Soybean	Glycine max	FEE RECEIVED $250.00 / DATE 4-15-77
4. FAMILY NAME (BOTANICAL)	5. DATE OF DETERMINATION	$250.00 / 4-15-77
Leguminosae	December, 1975	$250.00 / 2-17-78
6. NAME OF APPLICANT(S)	7. ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)	8. TELEPHONE AREA CODE AND NUMBER
Land O' Lakes, Inc.	R. R. 2 Webster City, Iowa 50595	515-543-4852

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (*Corporation, partnership, association, etc.*)	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Minnesota - Iowa	

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Drew Ivers
Land O' Lakes, Inc.
R. R. 2
Webster City, Iowa 50595

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

R/S ☒ 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

R/S ☒ 13B. Exhibit B, Novelty Statement.

☒ 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*

R/S ☒ 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* ☐ YES ☒ NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? ☐ YES ☒ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? ☒ YES ☐ NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

7 April 77
(DATE)

(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed. for purpose of variety release.

13a Give (1), the genealogy, including public and commerical varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.

14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

EXHIBIT A

Origin and Breeding History of the Variety

1. 'MAX' is a F_5 plant selection from the following cross: [Wayne X (Clark X Adams)] X Cutler.
2. 'MAX' was selected by the single seed descent (SSD) breeding method.
3. 'MAX' was selected as a F_5 plant and all its F_6 seeds bulked for placing into a plant row. All the F_7 seed from that plant row were harvested in bulk and placed into the first year's yield trial. After 4 years of yield testing, 200 F_{10} plants of 'MAX' were selected at random and harvested individually. All purification rows from the 200 plants that were "true to type" were bulk harvested and combined to make 7 bushels of pure breeder's seed. This seed is now being increased as Foundation seed. Certified seed will be produced from Registered or Foundation seed.
4. 'MAX' may have up to 0.1% mechanical mixtures.
5. 'MAX' reached genetic stability in the F_5 and our production records verify such stability up through breeder's seed. Additional evidence: 'MAX' was accepted for certification as Foundation seed by the Iowa Crop Improvement Association. (Copy attached).

EXHIBIT B

Williams has been determined to be the most similar variety to MAX.

MAX differs from Williams in that:

1. MAX has purple flowers - Williams has white.
2. MAX has a purple hypocotyl - Williams has green.
3. MAX has brown pods - Williams has tan.
4. MAX has scattered pods - Williams has concentrated.
5. MAX has a black hilum - Williams has light black.

EXHIBIT D

Additional Data of Comparisons"

1. Public and Private data 1975-76 combined:

Variety	# tests	Yield	Mat.	Ldg.	Ht.	Sd. Size
MAX	10	41.8	9-28	1.6	36"	2300
Williams	10	38.7	9-29	1.4	35"	2300

2. Iowa State-Southern test, 1975-76 combined:

Variety	Yield	Mat.	Ldg.	Ht.	Sd. wt.* per 100	%* Oil	% * Protein
MAX	49.2	9-24	1.8	38"	17 g.	21.0	41.15
Williams	46.0	9-25	1.8	40"	16 g.	21.7	38.30
Cutler 71	44.2	9-26	2.2	45"	15 g.	19.8	40.60
Wayne	44.4	9-20	1.9	41"			

3. Iowa State University-Southern test data 1975,76, & 77 combined.

Variety	Yield	Mat.	Yield difference from MAX
MAX	49.8	9-21	0
Williams	46.4	9-23	-3.4
Wayne	45.2	9-16	-4.6
Cutler 71	43.8	9-24	-6.0
$LSD_{.05}$	1.6		

* Data taken from our labs, not Iowa State.

FORM GR-470-2
(6-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY

SOYBEAN *(GLYCINE MAX)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)

Land O' Lakes, Inc.

ADDRESS *(Street and No., or R.F.D. No.; City, State, and ZIP Code)*

R. R. 2
Webster City, Iowa 50595

FOR OFFICIAL USE ONLY

PVPO NUMBER
7700062

VARIETY NAME OR TEMPORARY DESIGNATION
MAX (LL 4102)

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:
[3] 1 = SPHERICAL 2 = SPHERICAL FLATTENED 3 = ELONGATE 4 = OTHER *(Specify)*

2. SEED COAT COLOR:
[1] 1 = YELLOW 2 = GREEN 3 = BROWN 4 = BLACK 5 = OTHER *(Specify)*

SHADE: [2] 1 = LIGHT 2 = MEDIUM 3 = DARK

3. SEED COAT LUSTER:
[2] 1 = DULL 2 = SHINY

4. SEED SIZE
[1 7] GRAMS PER 100 SEEDS

5. HILUM COLOR:
[6] 1 = BUFF 2 = YELLOW 3 = BROWN 4 = GRAY 5 = IMPERFECT BLACK 6 = BLACK 7 = OTHER *(Specify)*

SHADE: [2] R/S 1 = LIGHT 2 = MEDIUM 3 = DARK

6. COTYLEDON COLOR:
[1] 1 = YELLOW 2 = GREEN

7. LEAFLET SIZE *(See Reverse)*:
[2] 1 = SMALL 2 = MEDIUM 3 = LARGE

8. LEAFLET SHAPE:
[1] 1 = OVATE 2 = OBLONG 3 = LANCEOLATE 4 = ELLIPTICAL 5 = OTHER *(Specify)*

9. LEAF COLOR *(See reverse)*:
[2] 1 = LIGHT GREEN 2 = MEDIUM GREEN 3 = DARK GREEN

10. FLOWER COLOR:
[2] 1 = WHITE 2 = PURPLE 3 = OTHER *(Specify)*

11. POD COLOR:
[2] 1 = TAN 2 = BROWN 3 = BLACK

12: POD SET:
[1] 1 = SCATTERED 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:
[2] 1 = GRAY 2 = BROWN 3 = OTHER *(Specify)*

SHADE: [2] 1 = LIGHT 2 = MEDIUM 3 = DARK

14. PLANT TYPES *(See Reverse)*:
[3] 1 = SLENDER 2 = BUSHY 3 = INTERMEDIATE

15. PLANT HABIT:
[2] 1 = DETERMINATE 2 = INDETERMINATE 3 = OTHER *(Specify)*

16. HYPOCOTYL COLOR:
[2] 1 = GREEN 2 = PURPLE

17. SEED PROTEIN:
[ ] 1 = A 2 = B

18. NUMBER OF DAYS TO FLOWERING *(Place a zero in first box (e.g. [0 9]) when days are 9 or less.)*
[6 3]

19. MATURITY GROUP:
[5] 1 = 00 2 = 0 3 = I 4 = II 5 = III 6 = IV 7 = V 8 = VI 9 = VII 10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT *(Growth Chamber)* **AT 25° C.** *(Place a zero in first box (e.g. [0 2]) when size is 9 mm. or less.)*

[2 1 4] MM. LENGTH OF SEEDLING
[2 3] MM. LENGTH OF COTYLEDON
[1 4] MM. WIDTH OF COTYLEDON

21. DISEASE: *(Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)*

[0] BACTERIAL PUSTULE	[0] SOYBEAN CYST	[0] DOWNY MILDEW	[0] PURPLE STAIN	[0] POD AND STEM BLIGHT	[0] ROOT KNOT	
[0] FROGEYE	[0] STEM CANKER	[1] PHYTO-PHTHORA	[0] BROWN STEM ROT	[0] TARGET SPOT	[0] BROWN SPOT	
[0] BUD BLIGHT	[0] WILDFIRE	[0] RHIZOCTONIA ROT	[2] OTHER *(Specify)* Chlorosis (Tolerant)			

4

7700062

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Wayne	Petiole angle	Cutler
Leaf shape	Williams	Seed size	Cutler
Leaf color	Williams	Seed shape	Cutler
Leaf surface	Clark	Seedling pigmentation	Clark

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	115-130	1.8	38"	74mm	135mm	41.15%	21.0 %	45	133.4% of oi
Name of similar variety Williams	116-131	1.8	40"	75mm	136mm	38.30%	21.7	43	131.1% of oi

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"